

What is claimed is:

1. A method for preparing transformed plants expressing thyroid stimulating hormone receptor (hTSHR) or thyroid stimulating hormone receptor-extracellular domain (hTSHR-ECD), which comprises
5 the steps of:

(a) transforming plant cells with the following polynucleotide sequences: (i) a polynucleotide sequence encoding hTSHR or hTSHR-ECD; (ii) a promoter that functions in plant cells to cause the production of an RNA molecule operably linked to the
10 polynucleotide sequence of (i); and (iii) a 3'-non-translated region that functions in plant cells to cause the polyadenylation of the 3'-end of said RNA molecule;

(b) selecting transformed plant cells; and

(c) obtaining transformed plant by regenerating said
15 transformed plant cells.

2. The method according to claim 1, wherein said plant is *Nicotiana tabacum*, *Cucumis melo*, *Curcumis sativa*, *Citrullus vulgaris* or *Brassica campestris*.

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3. The method according to claim 1, wherein said transformation is performed with an *Agrobacterium* transformation system.

4. The method according to claim 3, wherein the *Agrobacterium* transformation system is an *Agrobacterium tumefaciens*-binary vector system.
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5. The method according to claim 1 further comprising recovering

hTSHR or hTHSR-ECD from the regenerated transformed plant.

6. A transformed plant prepared by the method of any one of claims 1 to 5 which expresses hTSHR or hTHSR-ECD.

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7. A method for preparing thyroid stimulating hormone receptor (hTSHR) or thyroid stimulating hormone receptor-extracellular domain (hTSHR-ECD), which comprises the steps of:

(a) transforming plant cells with the following polynucleotide sequences: (i) a polynucleotide sequence encoding hTSHR or hTSHR-ECD; (ii) a promoter that functions in plant cells to cause the production of an RNA molecule operably linked to the polynucleotide sequence of (i); and (iii) a 3'-non-translated region that functions in plant cells to cause the polyadenylation of the 3'-end of said RNA molecule;

(b) selecting transformed plant cells;

(c) obtaining transformed plant by regenerating said transformed plant cells; and

(d) recovering hTSHR or hTHSR-ECD from said transformed plant.

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8. The method according to claim 7, wherein said plant is *Nicotiana tabacum*, *Cucumis melo*, *Curcumis sativa*, *Citrullus vulgaris* or *Brassica campestris*.

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9. The method according to claim 7, wherein the transformation is performed with an *Agrobacterium* transformation system.

10. The method according to claim 9, wherein said *Agrobacterium* transformation system is an *Agrobacterium tumefaciens*-binary vector system.